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ABSTRACT

This paper examines some general principles affecting the timing, extent, and direction of fiscal changes in public school finance systems. To develop a framework that is applicable to a wide variety of states, the analysis concentrates on two dimensions: allocation and distribution. The median voter model and the fiscal neutrality model of state financial decision making are examined. Major changes in public school finance systems occur when states adopt fiscal neutrality principles. The extent and direction of change are understood by considering allocation and distribution patterns across time. This results in a pattern that can be graphically illustrated in a sawtooth pattern with small random gains and losses in fiscal decisions from one legislative session to the next. The data in this study show that change in fiscal policy occurs during nonreform periods as well as periods of major reform. It is important to understand and influence fiscal behavior in nonreform periods if gains are to be made in allocational adequacy and distributional equity. Included in the paper are a list of references, eight graphs, and three tables. (MD)

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State Fiscal Behavior: A Study of Resource Allocation and Distribution

States go through historical periods in which they make major reforms of their public school financing systems. They pass through other periods of time characterized by minimal change. Why these cycles occur in the manner they do, and whether there are regularities among cycles, is a matter which is not well understood. This paper attempts to set out some general principles which condition the timing, extent and direction of fiscal change. Two models of fiscal behavior are examined through a data set covering four states over a period of ten years.

The research has several more specific objectives. One is to link state-by-state studies of education finance with certain theories of political economy. Studies of individual states are very numerous (Goertz and Hickrod, 1983; Elmore and McLaughlin, 1981; Carroll, 1979), and they employ a wide variety of research procedures (Lhene, 1978). Prompted by the famous Serrano decision in California, per pupil spending disparities were analyzed to provide documentation for similar court cases in nearly every state. Common statistical techniques evolved from these studies to assess spending equality (Berne, 1979a, 1979b; Berne and Stiefel, 1983). But common analytic frameworks for policy have not evolved (Rossmiller and Geske, 1976), and the time seems right for building upon the numerous case studies which now exist.

A second objective is to try to clarify policy processes for the level of government of interest here, state government. Much school finance research focuses on expenditures. But an expenditure focus necessitates a consideration of policy at all three levels of government simultaneously. Different governments follow different and sometimes competing policy objectives (Timpane, 1978). Unless one level of government assumes full financial control, it may prove impossible to elucidate policy analysis through expenditure analysis.

A third objective is to move toward development of a framework for analysis which is applicable to a wide variety of states in different time periods. For this purpose the paper adopts the Musgraves' conceptual framework of the public economy in two dimensions, allocation and distribution (1959; 1973). Allocation deals with magnitudes or total sums of money available for a public good, the adequacy question. Distribution describes the characteristics of fund recipients in some way or set of ways, the equity question. Together these concepts answer the questions, "How much money was spent?" and "On whom was it spent?" Musgrave emphasizes that these two concerns are often best separated for purposes of empirical analysis. School finance studies typically focus on the distribution issues.

A fourth objective was to apply the concepts of allocation and distribution to interpret the specific fiscal behaviors of four states during a decade of observations. The time period for the study was the 1970's, one of unprecedented popular and academic interest in school finances. Due in large part to the judicial successes of Serrano-type court decisions in states across the nation, over one-third of the states made major reforms (Bursley, 1975).

Two Models of Fiscal Behavior

This section presents two models describing financial decision-making in states. The focus is on (1) the total sum of state aid allocated to school districts in the aggregate and (2) the shares distributed to each district. Models also deal with interactions between allocation and distribution.

The first model may be called the median voter model (Hotelling, 1929; Mueller 1983). This model holds that public policy is the product of compromises among persons and groups who are likely to hold somewhat more extreme views. In

the present context the compromise is between contending pro-education versus low-tax protagonists with no fixed expectations as to the outcome of the struggle. The model assumes that "...there are no generally accepted interpretations of what the principle of equality of opportunity demands in the way of a specific program of education" (Mort 1941). People's views of adequacy and equity in education financing will differ over time according to the preferences of the median voter. Applying Musgrave's division of the public fisc to Mort's analysis of school finance politics produces a model of voters who vary in their preferences for funding adequacy and funding equity. The important point is that adequacy and equity are compromised out according to two different and independent preference functions. See figure one.

INSERT FIGURE ONE ABOUT HERE

In the figure state legislatures are the proxy for the body politic. Legislators' preferences are shown on the two policy dimensions, allocation and distribution. Left leaning legislators on the allocation continuum favor substantial increases in state school spending, the "pro-education" legislators. Right leaning legislators are the anti-tax group; they want little or no state aid increase. On the distribution continuum left side legislators will feel that aid should be given in a highly equalizing fashion with poor or needy districts receiving much more aid per pupil. Right side legislators will have low preferences for equalization. At the extreme they will want the aid system to resemble a flat grant per pupil or per district.

The model posits that, after all the alternative and complex aid proposals have been discussed the legislative decision will finally come down to the issues of allocation and distribution. Most legislators will be

uninterested in school aid formula details, but "How much is to be spent?" and "How much will each district get?" are questions which are sure to interest nearly everyone. As the debate proceeds the majority necessarily must agree and the two preference functions must merge into a single aid package embodying a single set of preferences. The final resolution will fall within the legislature's zone of decision. But since the compromise enacted in any one legislative session will leave many people dissatisfied and since external events influence legislative decisions, the zone of decision may shift rightward or leftward across time.

As noted above the independence of the allocation and distribution schedules is a crucial feature of the model. Independence seems an intuitively reasonable assumption. One can certainly imagine particular legislators who are rightward leaning on one dimension and leftward leaning on the other, or that distribution preferences of the legislative majority will change depending upon the amounts of money to be distributed, or that the individual members composing the legislative majority itself will fluctuate depending upon the alternative proposed. The normal curve in figure one is a convenient expository device but one can certainly imagine highly partisan legislative sessions in which there is a bi-modal distribution of preferences.

Finally, if one were to predict what sort of allocation/distribution system the median voter model would produce across time, it would look something like figure two. Say the solid line represents, reading on the distributional

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INSERT FIGURE TWO ABOUT HERE

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equity of a state's aid formula over some period of years, y, to y_n; the

dotted line represents the adequacy of the state's funding, adjusted for changes in buying power, over the same period of years. (Assume that measures of these variables are available and unambiguous.) The figure suggests that, absent any fixed principles, across time there will be no empirical relation between the adequacy and the equity of state funding for education. A saw tooth pattern would be evident. Policy would be guided by a random series of provisional and short-lived compromises lasting from one session of the state legislature to the next.

Because of these characteristics it is not suprising that the median voter model has endured much criticism in recent years (Benson, et. al. 1974; McCabe and Odden, 1982; Shalala and Williams, 1974; Wise, 1968 Sacks, 1964). All observers of fiscal politics, however, would acknowledge the potential explanatory power of the median voter model in a positive sense even if they would reject it in a normative sense.

The second model to be considered in this paper is the fiscal neutrality model. It is based on a particular philosophy of justice (Rawls, 1971) designed to overcome the perceived problems of the median voter model. Allegedly required by state constitutions, the fiscal neutrality model would direct state fiscal behavior toward an operational policy objective, "... the quality of public education may not be a function of wealth other than the wealth of the state" (Coon, Clune and Sugarman, 1970). The principle played a determinative role in the Serrano decision in California. While it was by no means reflected in all subsequent court decisions around the nation, the principle did provide the primary basis for subsequent litigation and legislative activvity on the school finance issue.

The fiscal neutrality model still provides legislatures very considerable discretion over the amount and distribution of funding. But it ties any

specific allocati ecision to a specific distribution decision. That is, the nexus between allocation and distribution is mandated by the fiscal neutrality principle. Under this model the state must arrange its fund distribution so that all districts finally have either the same actual revenues or else access to wealth on equal terms. The state effects this result by making up the difference between local revenues or local tax base and the state guarantee.

INSERT FIGURE THREE ABOUT HERE

In figure three the state's aid is a direct function of local revenues or local tax base. Three allocation/distribution plans are shown in the figure for three representative school districts. The distribution function OD sets the relationship between the state share and the local share for financing the educational offering in each local district and for the state as a whole.

Let OR represent the revenues or tax base of the state's richest district at some point in time before the fiscal neutrality model is implemented. To implement the model the state has three options. It can make every district exactly as well off as district R, in which case it must assure all districts revenues/tax base access equal to OA1. The state can give every local district including even the richest some aid, in which case every district's wealth must be raised to some level OA where OA > OA1. Or third the state can decide that it cannot afford to spend more than OA2. In this third case the state must extract revenues/tax base from district R equal to QR. This last variant is the so called "Robin Hood" or "recapture" proposal.

Under all three arrangements allocation and distribution are set in a law like manner. The state plan will bring each district's total state-local

finances from the level which is actually resident in the district up to the state guarantee. For example median district M will finance OM_M locally and will receive state aid equal to AM_M, if the state funds schools at the highest level, $A1A_M$ if the state funds schools at the level of the richest district and $A2A_M$ if the state parsimoniously allocates only A2 dollars to the total state local funding plan. Likewise poor school district P will finance OA_p as its local share and then receive aid equal to AA_p, $A1A_p$ or $A1A_p$ depending upon the state's allocation decision. Financing is offered to all on equal terms as the fiscal neutrality model requires.

In this model too the legislature has a zone of decision, AD, AD1 or AD2. But in this model, unlike the median voter model, allocation/distribution preferences cannot be chosen independently. The legislature could move the allocation/distribution schedule (AD) upward and to the left, thereby increasing the local share of financing and commensurately reducing the state share. Or the legislature could move AD downward and to the right reducing the local share and increasing the state share. But none of these changes would destroy the allocation/distribution nexus. That is, the total amount of state aid available would always determine the amount each district is to receive (or pay in).

As discussed above the fiscal neutrality model is by no means fully prescriptive. What would happen to allocation and distribution under a neutrality principle? It could, theoretically at least, result in three alternative legislative courses of action.

1. lower state aid and a more uneven distribution of that aid across local districts

2. higher state aid and a more uneven distribution of that aid across districts, or

3. higher state aid and a more uneven distribution up to some point and then a more even distribution as aid increased above that point.

But what would most definitely not occur over time under the fiscal neutrality principle would be a movement from higher state aid to lower combined with a movement from a more uneven distribution of funds to a more even distribution across districts. Figure four illustrates the three permissable and the one unpermissable possibility graphically. The dotted line represents the unpermissable option. The arrows represent the direction of change over time if the fiscal neutrality principle were to be phased in over several legislative sessions.

INSERT FIGURE FOUR ABOUT HERE

These assertions need elaboration. First, the state could implement the fiscal neutrality model with low state revenue levels simply through recapturing local revenues from rich districts and redistributing them to poor districts. This would require vast measured inequalities in the distribution of aid since many districts would have negative aid. The range among districts in state aid would be highly unequal, from large negative numbers to large positive numbers. As the state's own revenue allocation grew the measured unequalities in the distribution of that revenue could grow smaller with fewer and fewer districts falling under the recaptive provision. This is possibility number one.

Recapture has proven to be politically difficult; therefore, option two seems by far the most likely policy. State aid, adjusted for inflation and buying power changes over time, would increase even as the distribution of that aid became more unequal. This policy would increase aid for the poorest districts while "softening the blow" for richer districts.

Finally, if the state satisfied the goal of raising every district to the wealth level of the richest district and had still more revenue at its dispocal, it could give some aid even to the richest district(s). Measured inequalities in the fund distribution would decrease since every district would receive at least some aid as allocations of state revenues grew higher and higher. This is policy option three, which may well be considered an addition to or further variant of option two.

But if the fiscal neutrality model were the operative policy in a state, the one fiscal behavior which could never occur would be less state aid combined with a movement toward a flat grant per pupil or per district. Less aid distributed more evenly across districts/pupils is not inconsistent with the median voter model, but it is inconsistent with the fiscal neutrality model. Furthermore the desired consistent movements across time would be strong circumstantial evidence of the explanatory power of the fiscal neutrality model. Erratic movements across time with little or no correlation between allocation and distribution would be strongly persuasive evidence of the potency of the median voter model.

A Test of the Models and Discussion of Results

Data presented here come from a study of four northeastern states designed to track change in fiscal behavior over the decade of the 1970s. Two of the states, Maine and New Jersey, were widely known as reform states presumably guided by the fiscal neutrality model. The other two states, New York and Rhode Island, were known not to have made major reforms over the decade. Presumably the median voted model would be more applicable in these states. Data was gathered for all school districts in all four states. But since each state is unique generalities among states and regions are highly tentative and should

be made with extreme caution. The years for which data was gathered are shown in table one.

INSERT TABLE [illegible] ABOUT HERE

These four states were undergoing varying degrees of judicial pressure from Serrano type court cases and its accompanying fiscal neutrality standard. New Jersey was being hard pressed as a result of the Robinson decision. In the summer of 1975 the courts, dissatisfied with attempts of the legislature to implement the fiscal neutrality principle to that date, closed the public schools for a brief period. This judicial act prompted a major legislature reform (Goertz, 1978). New York, long known as one of the nation's leaders in education, was in court most of the decade as defendant in the Levittown case. Early decisions went against the state; however they were lower court decisions. It was not until the present decade that the case was finally settled in the state's favor. Maine did not have a long history of litigation in 1974-75, the year in which a major reform was passed. But the political leadership knew that Maine's aid system had potential legal problems. The state acted while it had a revenue surplus partly to head off anticipated unfavorable court decisions. (Furman, 1979; Perrin, 1984) Rhode Island, a small and relatively homogeneous state, was virtually by-passed by the reform movement (Ward, 1978).

All four states follow the northeastern pattern of high reliance on local property taxes. In 1970 none of them provided as much as fifty percent of funds from the state level. Nevertheless the states are widely diverse in size, wealth, patterns of school organization and metropolitan development. They provide a highly varied forum to test the two models of fiscal behavior.

To make the concepts of allocation and distribution operational two measures were used for each concept.

Allocation

(a) state aid to public elementary-secondary education as a proportion of all state government expenditures (M1)

(b) state aid to public elementary-secondary schools as a proportion of personal income in the state (M2)

Distribution

(a) the amount of dispersion or inequality that exists in the distribution of state aid among school districts based on their pupil populations, (V1)

(b) the amount of dispersion or inequality that exists in the distribution of state aid among school districts, without regard to their population size (V2)

All four measures take into account the fact that the 1970's was a time of high inflation and correct for this. The statistic M1 does this by looking at education's relative share in the state budget; M2 measures education's relative share of personal income. In this way state education aid is compared to two related money aggregates which also could be expected to grow rapidly in dollar terms during an inflationary time period.

A persistent problem with fiscal neutrality measurement in state aid distributions is the fact that almost no one believes that per pupil spending should be exactly equal across all districts (Garms, 1978). Per pupil spending should be modified to reflect a variety of district characteristics such as location, size, cost of living, tax effort, and special pupil populations. Arguably some districts should spend more than others per pupil in light of these differences.

Since it focuses solely on state revenues, the present study does not directly deal with the issue of desired local spending differences. But if a

state follows the even modified fiscal neutrality model, monies necessarily must be distributed more unequally than they were before reform. More state monies may be targeted to high need school districts, which already may be high spending, or to low spending school districts which may be deserving on financial grounds. Either way there will be a movement away from the flat grant.

The gini coefficient and the coefficient of variation are two widely used measures of distributional inequality.[8] In school finance research they typically are used to measure spending inequalities at the local level rather than state aid inequalities. This study conceptualizes a movement toward state aid inequality as the appropriate measure of the potency of reform. V1 is measured by the Gini coefficient; V2 is measured by the coefficient of variation.

The gini coefficient determines what proportion(s) of pupils receive what proportion(s) of the state aid. According to this line of reasoning a larger proportion of state aid must go to a smaller proportion of pupils in order to overcome differences in local need or wealth. As a result of reform inequality in state aid as measured by the size of the Gini coefficient would grow. The coefficient of variation takes into account the simple variance of a distribution relative to the value of the mean. For this statistic the district is the unit of analysis. It was conceptualized that the fiscal neutrality principle might result in a more unequal distribution of dollars across school districts as well as or instead of inequality in the per pupil distribution. Higher coefficients of variation over time would mean that more aid was being concentrated on poor or needy school districts.

Detailed summaries and interpretations of change across time within the four states are reported elsewhere (Lescault, 1983; Lescault and Jones, 1984). Table reports numerical summaries of the four states for the four measures in

INSERT TABLE 2 ABOUT HERE

each year studied. The table points to clear differences between reform and non-reform states. The most compelling observation is that year-to-year fluctuations in measures were smaller for New York and Rhode Island, greater for New Jersey and Maine. What emerges clearly is a picture of fiscal turbulence accompanying reform, with dramatic change occurring from one legislative session to the next. On all four measures New York and Rhode Island ended the decade with lower numbers than they began. Both states were allocating less school aid in a less equalizing fashion. By every measure Maine and New Jersey allocated considerably larger sums for schools at the end of the decade than at the beginning.

Numerical data for distributional equity in the reform states presents a very mixed picture. All four measures in both states show progress during the middle years of the decade and a distinct slippage by the end. Maine's system was more like a per pupil flat grant at the end of the decade than at the beginning. New Jersey's system was more like a flat grant per district at the end of the decade than at the beginning. Each state showed improvement on its other distribution measure across the ten years.

Table 3 shows the rank order correlations among all four variables for each state. Twelve measures indicate a moderate or highly positive correlation between the inequality of the fund distribution and the size of the allocation. Three measures show very small negative correlations between adequacy and equity. One measure, the V1/M1 correlation in Maine, is high and negative.

These findings provide some statistical validation for the conventional wisdom in school finance that redressing of disparities in spending will evoke

greater absolute amounts of school aid. States sometimes address the equity question through the vehicle of adequacy. No district looses and the poorest districts gain.

What is perhaps more surprising is that while the conventional wisdom is often true, it is by no means always true. There are examples of funding increases combined with equity decreases from one legislative term to the next; and there are other examples of equity increases without funding increases. These situations explain the moderate levels of most of the positive correlations in table 3 and are graphically illustrated in Figures 5 and 6.

Figure 5 shows the M1/V1 relationship for the State of Maine across the decade. During the early years to 1975 both the adequacy of the allocation and the inequality of the distribution grew very substantially suggesting the explanatory power of the fiscal neutrality model policy option two. Maine was allocating much more money and concentrating that money in areas of greatest local need as defined by the state. From 1975 onward, however, an entirely different picture emerges. Allocations increased even while Maine's distribution mechanism was shifting back toward a flat grant per pupil. By the end of the decade Maine was spending much more money to acnieve much less distributional equity, in per pupil terms. The later years support the median voter model rather than the fiscal neutrality model.

Figure 6 charts the M2/V2 relationship in New Jersey. Here it is very hard to find any empirical support for the fiscal neutrality model. From 1971 to 73, for example, the state moved toward a flat grant per district while allocating more money in total. The state continued to allocate much more money through 1977 while distribution followed an erratic saw-tooth pattern. Toward the end of the decade both adequacy and equity declined signalling the

end of the reform era. But even at the height of reform in New Jersey, one looks in vain for consistent links between allocation and distribution. It is clear that the decisions on how much to spend and on whom to spend it were made highly independently of one another.

Figures 7 and 8 chart the non-reform states. Again there are some years in which there is a distinct move away from adequacy and equity (1973, 1977, 1979 in New York) other years where there is a distinct movement toward adequacy and equity together (1973 in Rhode Island, 1975 in New York) and other years where the trends are divergent (1975, in Rhode Island, 1980 in New York). These findings should be heartening to school advocates. They need not wait for major reforms in order to make significant gains in funding adequacy and equity. The median voter model can produce positive results. The fiscal neutrality principle can be misapplied to the apparent detriment of education.

These figures do not chart all the possible relationships from the data in this study, but further analysis confirms the finding that the median voter model is a more powerful explainer of state fiscal behavior than the neutrality model. Legislative policies for allocation and distribution of school funds are independent of each other most of the time. There are periods when states appear to be motivated by fiscal neutrality principles - 1973-75 in New Jersey and Maine. In such periods the neutrality model has great political potency. States act consistently across legislative sessions to promote higher levels of funding and greater attention to pupil needs. But these periods apparently are short lived, lasting no more than two legislative sessions in this study.

Conclusion

Leaders of school finance reform have observed that states act highly independently of each other in adopting policy (Kelly, 1982). Based on this

study, one may add that different sessions of the legislature within a single state also act highly independently of one another. And this observation seems to have wide application across states and time periods.

If the median voter model seems much the best explainer of fiscal behavior most of the time even in reform states, what then are the effects of the fiscal neutrality model? Two observations seem pertinent here. First, the allocative effects of the neutrality model seem to be more long lasting than the distributional effects. For reasons as yet not understood the distributional aims of school finance reform seem to slip away much more rapidly and completely than the allocative effects. Schools spend more in the aggregate, but old inequalities among them resurface. Elucidating the reasons for this would seem a topic worthy of further investigation.

Secondly, reform is associated with several consecutive sessions of great fiscal turbulence in the state legislature. Marked shifts in allocation and distribution occur from one session to the next. Reform does not change the rules of the game; it changes the stakes for which it is played. It is as if the reform minded fiscal neutrality model becomes the banker financing the politicians' move from the $10 table to the $100 table. Winning is not easy, but if you have the money its a better place to play.

Dramatic changes do not occur in the non-reform states but the shifts there are important nonetheless. Meaningful changes take place in every legislative session even if rigorous and systematic research is rarely conducted in the non-reform years. From the data presented here one might assume that changes in these non-reform years are accomplished not through the advancement of compelling ideas but through the mutual interests of legislative coalitions. Theories of political coalitions have proven difficult to test except

in experimental conditions (Hill, 1973). State school aid policy would seem to be an ideal forum for political coalition research.

This paper began with a promise that it would lay out some general principles which govern the timing, extent and direction of change in state aid policy. In summary it may be said that major changes occur when states adopt fiscal neutrality principles; minor but significant changes occur in every session of the legislature. Periods of major change are rare, usually not lasting more than two consecutive legislative sessions within any decade. States may go through an entire decade or more with only minimal change.

The extent and direction of change can best be understood through separate consideration of allocation and distribution patterns across time. The most graphic description of extent and direction is saw tooth pattern, with small, random gains and losses from one legislative session to the next.

If past is prologue, the saw teeth will continue to slice through the years into the indefinite future. But past need not be prologue in this case. "Major" reform has been perhaps too much a preoccupation of educational leaders and school finance specialists. These data clearly show that important and change can and does occur in non-reform periods too. We need to understand (and hopefully influence) state fiscal behavior in the non-reform periods as well as the few brief periods of reform. If we can first understand and then master the policy process in these "quiet years", gains made in allocational adequacy and distributional equity may prove more sustainable over time.

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Figure One
The Median Voter Model

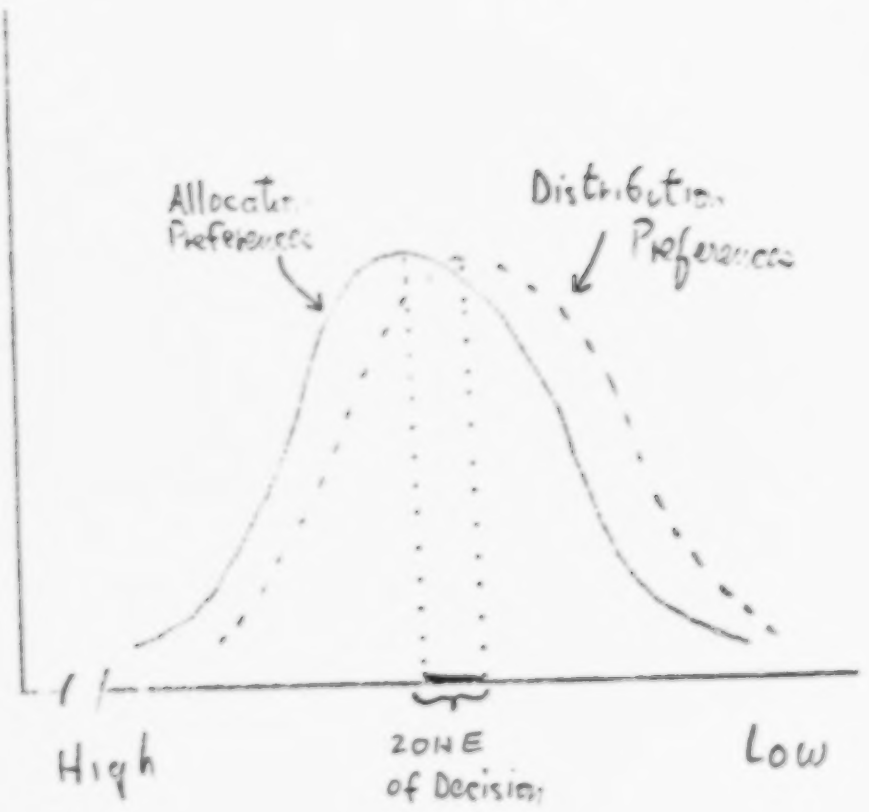

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Figure Two

Allocation and Distribution Across Time
In a Median Vote Model

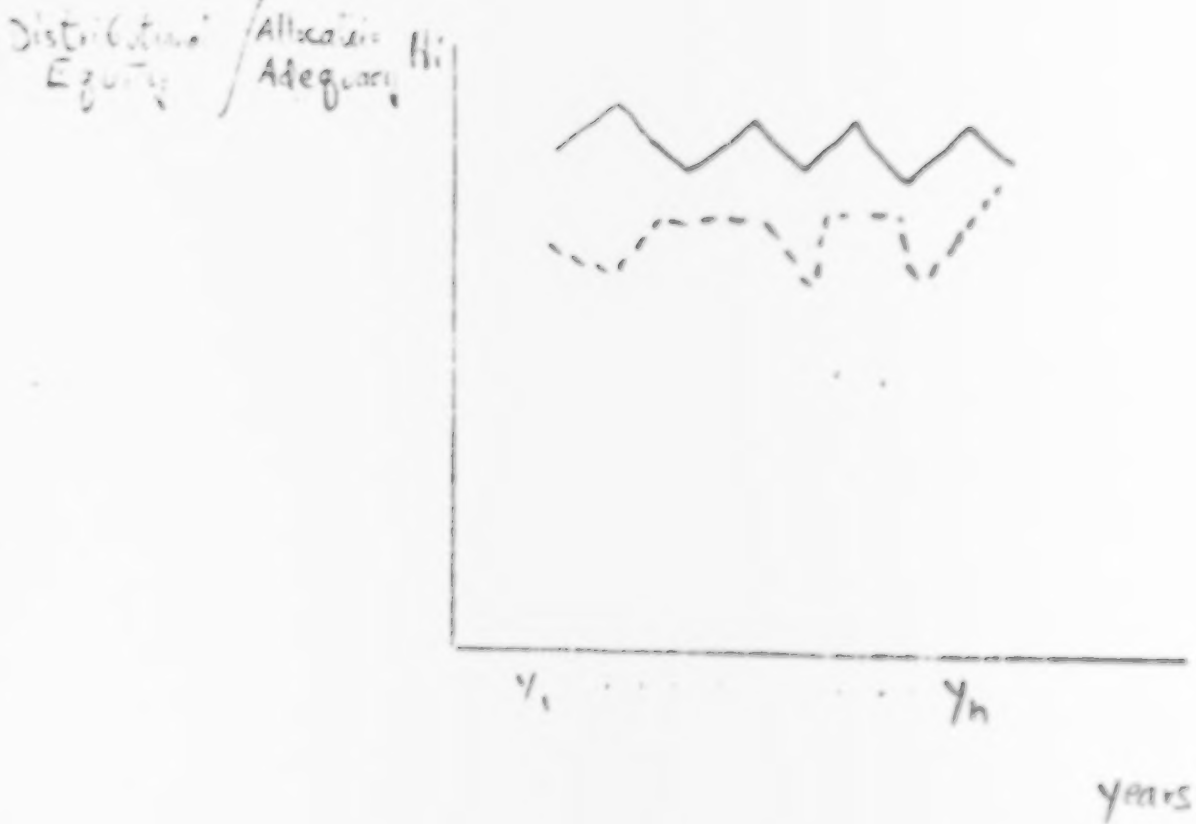

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Figure Three

The FISCAL NEUTRALITY MODEL

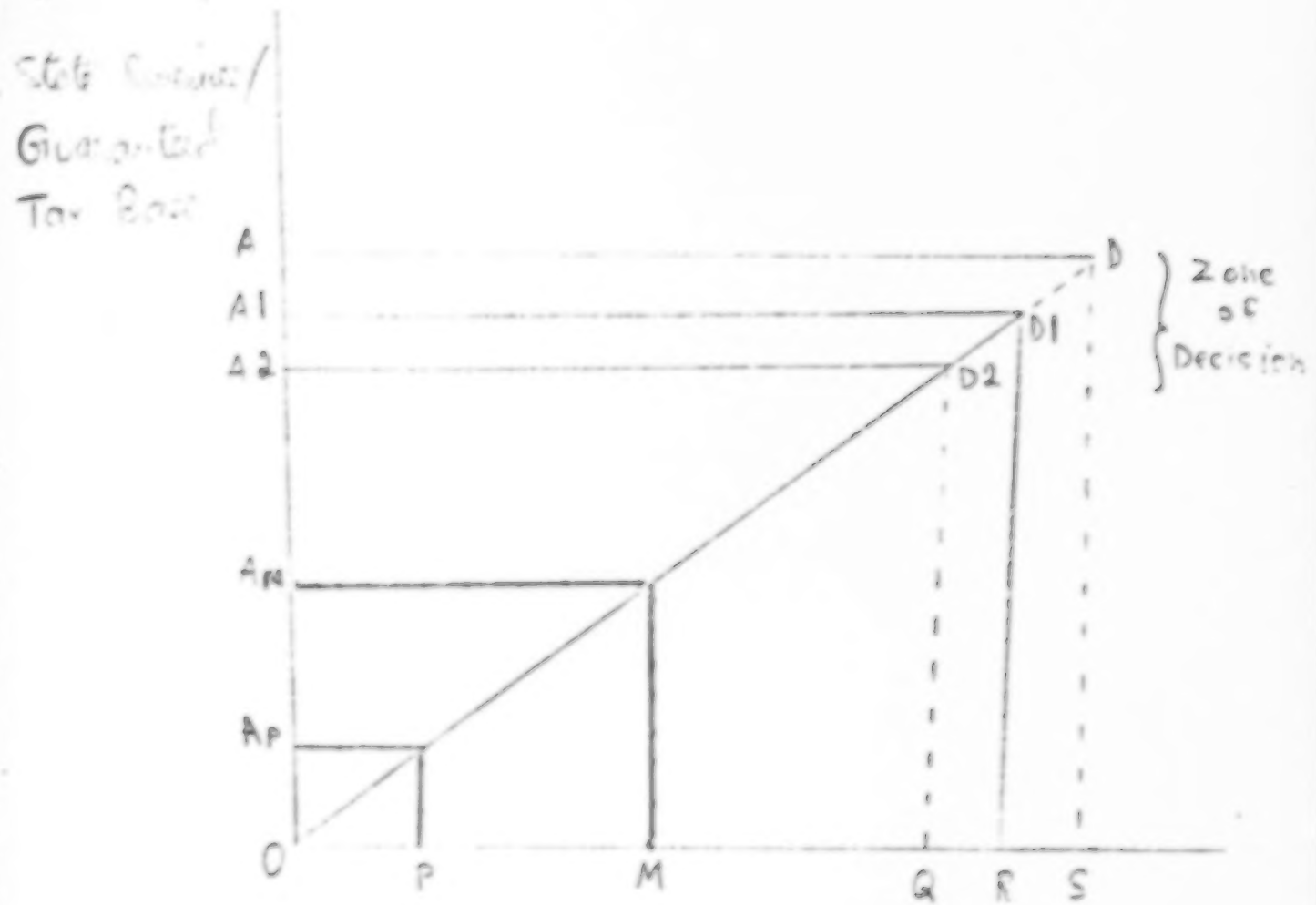

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Figure Four

Allocation And Distribution Actions Taken In
A Fiscal Neutrality Model

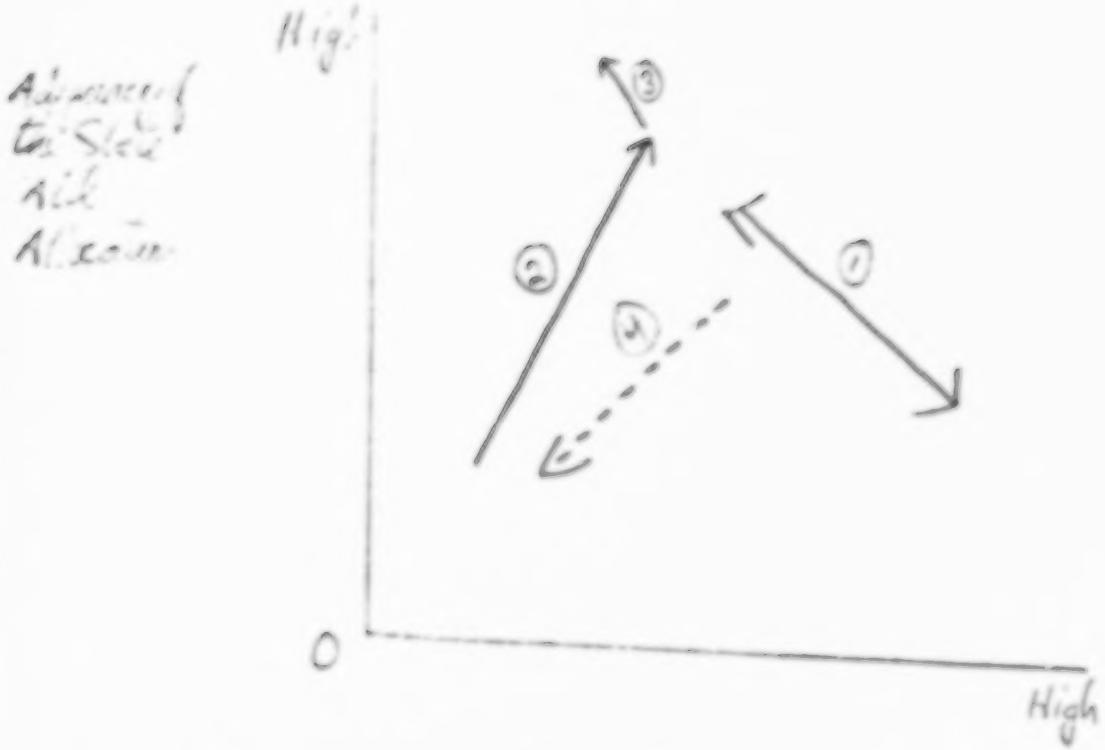

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Figure 5 - Allocative and Distributive ... in the State of ... , 1971-1981

Aggregate expenditure (Y)	Gini (VI)
12.8	
	.43
	.42
	.44
	.43
	.42
	.41
	.40
	.39
	.38
11.0	.36
10.9	.35
10.8	34
	33
	32
	31
	30
	29
	28
10.1	27
	26
9.9	25
9.8	24
9.7	23
9.6	22
9.5	21
9.4	20

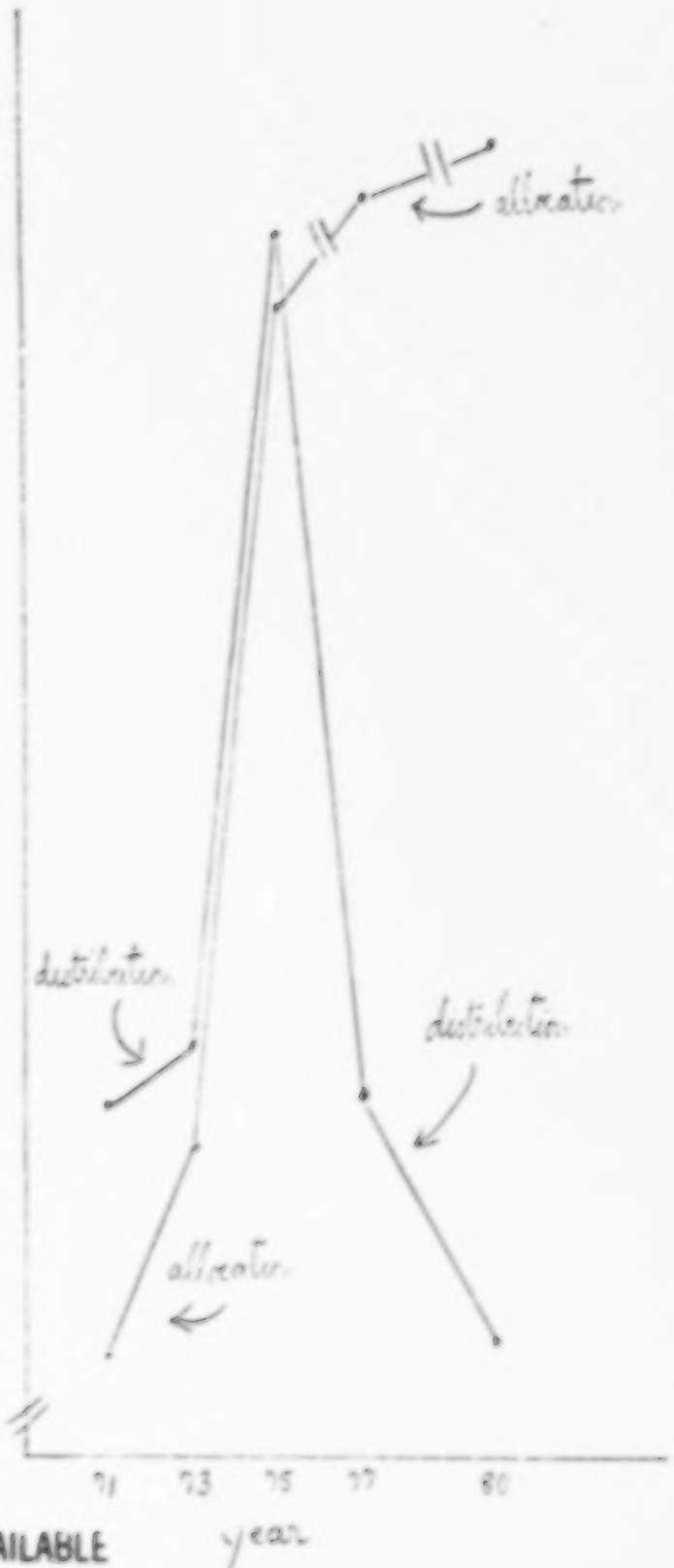

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Figure 6- Allocation And Distribution In The State of New Jersey: 1971-1981

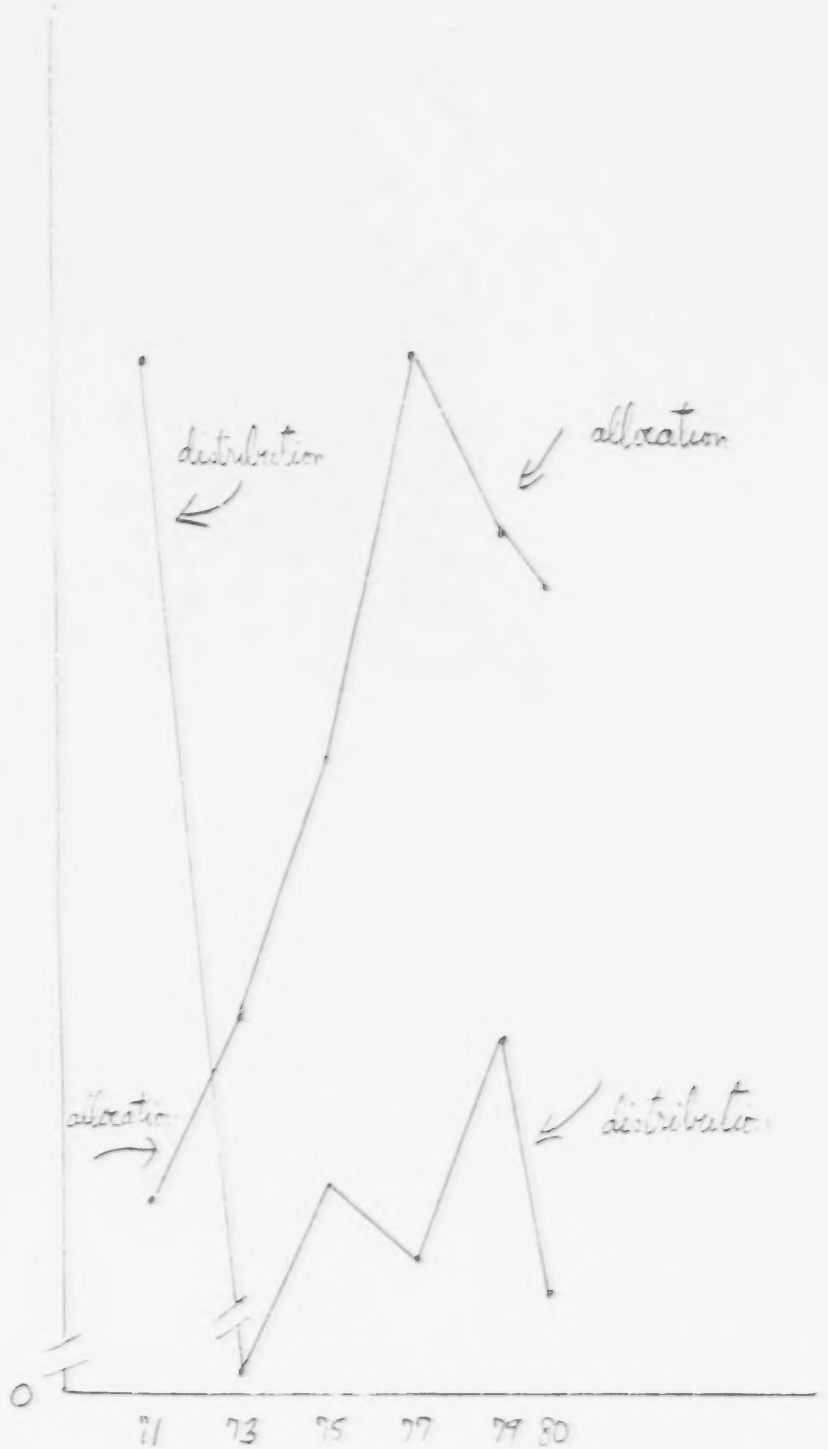

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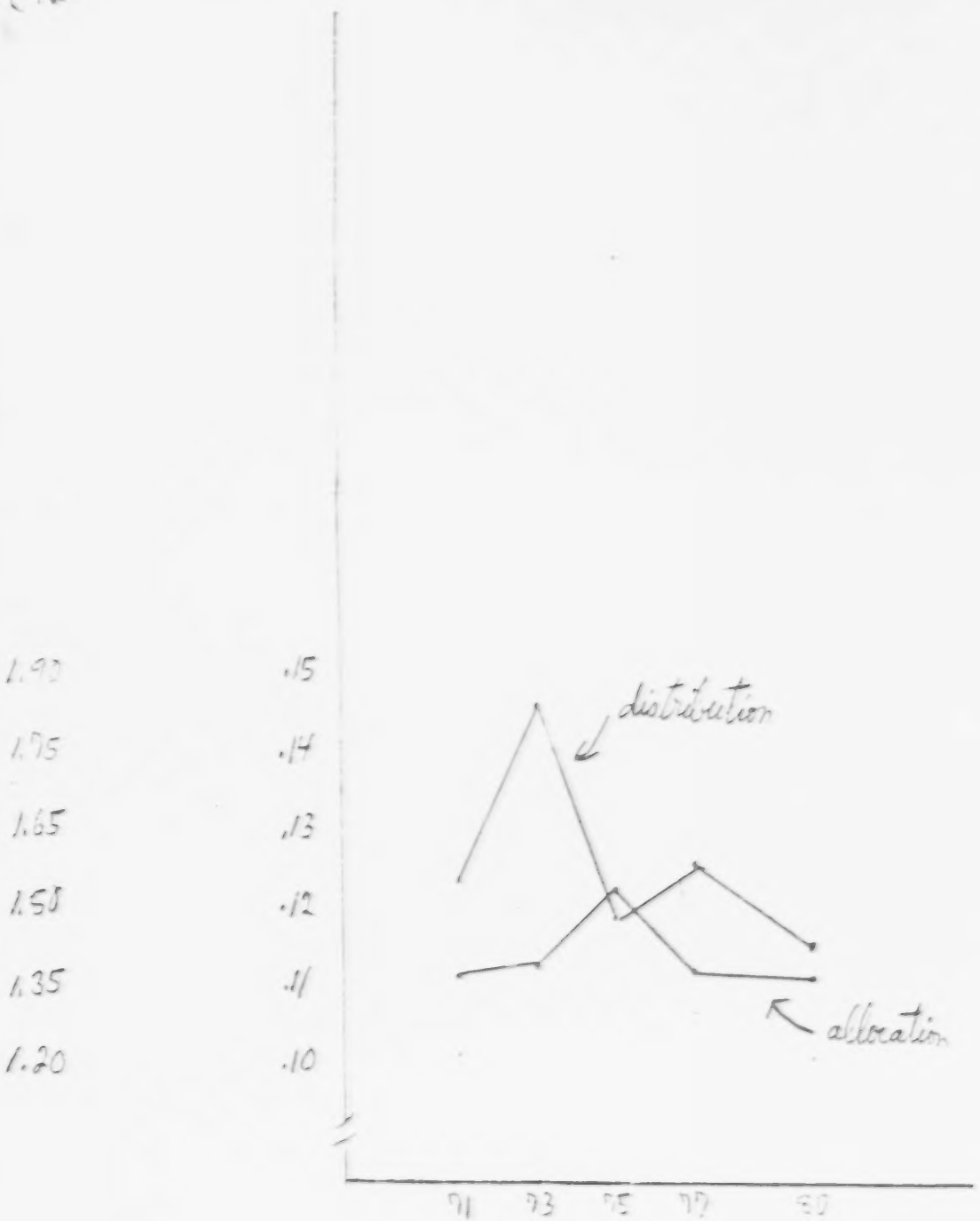
Figure 7 - Allocation and Distribution in the State of Rhode Island, 1971-81



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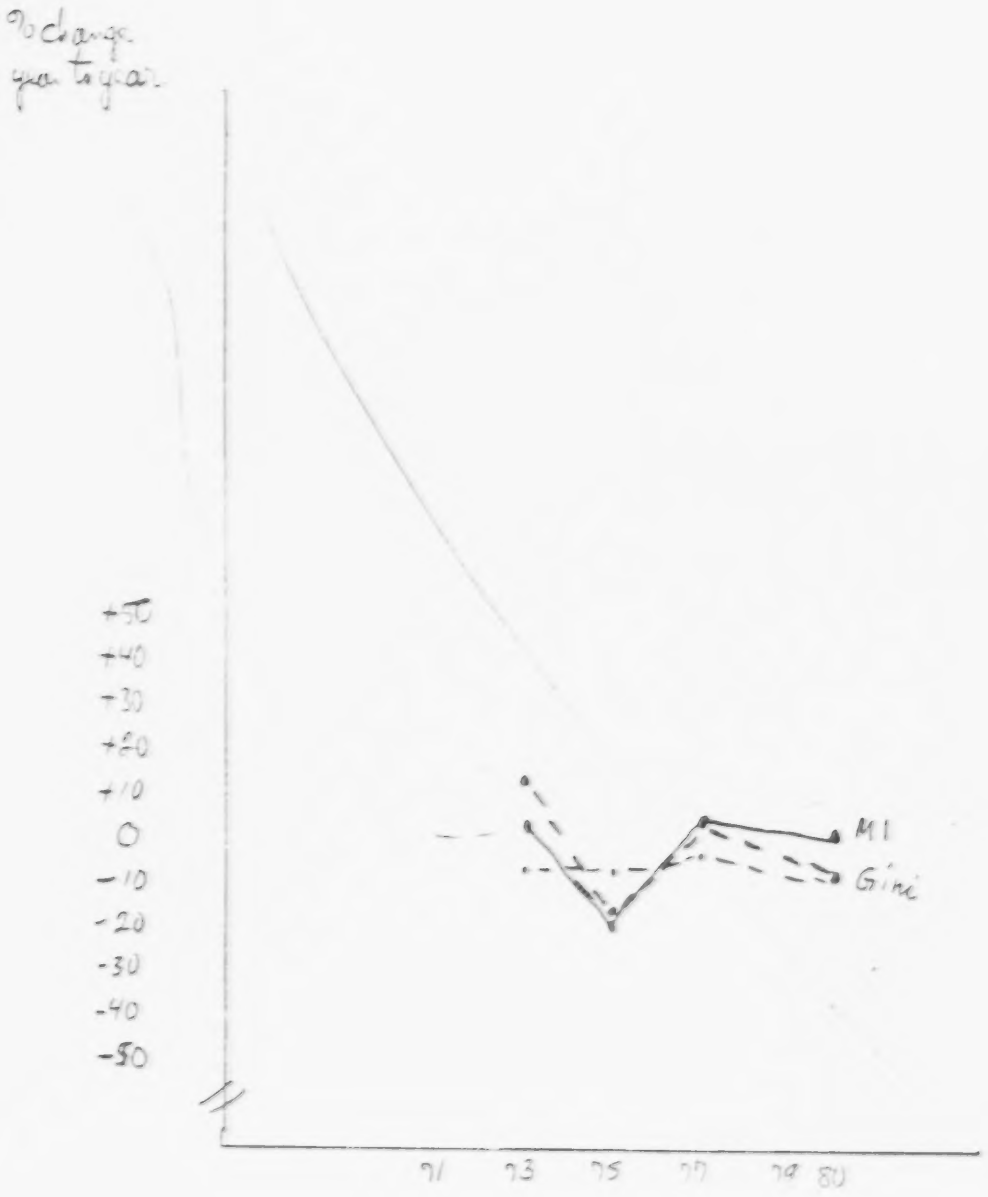

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Figure 8 - Allocation and Distribution in the State of New York, 1971-81

State aid as % Gut. Expend (M1)

Coeff. of Vaire ion (V2)

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Table 1

Years Included in the Study

	Year									
	71-72	72-73	73-74	74-75	75-76	76-77	77-78	78-79	79-80	80-81
Reform										
Maine	0		0	X	0		0			0
New Jersey	0		0		0	X	0		0	0
Non-Reform										
Rhode Island	0		0		0		0			0
New York	0		0		0		0		0	0

Note. X = reform year (i.e. the year that major legislative modifications were used to distribute aid)
0 = years for which data were collected

Table 2

Summary of Rhode Island Data

	Variables							
Year	Gini Coefficient (V1)	Percent Change	Coefficient of Variation (V2)	Percent Change	State Aid as a % of Govt. Exp (M1)	% Chg.	State Aid as a % of Personal Income (M2)	% Chg.
1971-72	.124718		.340916		10.5595		1.3631	
1973-74	.145333	16.5	.315452	-7.5	10.8307	2.6	1.4252	4.6
1975-76	.119715	-17.6	.290309	-8.0	8.7624	-19.1	1.5871	11.4
1977-78	.125836	5.1	.286664	-1.3	8.9977	2.7	1.3747	-13.4
1980-81	.115423	-8.3	.260887	-9.0	9.0325	.4	1.3615	-1.0

[a]Rhode Island Department of Education, State Statistical Tables.

[b]Bureau of the Census, State Government Finances.

[c]U.S. Department of Commerce, Survey of Current Business.

Table 2 (continued)

Summary of Maine Data

Year	Variables							
	Gini Coefficient (V1)	Percent Change	Coefficient of Variation (V2)	Percent Change	State Aid as a % of Govt. Exp (M1)	% Chg.	State Aid as a % of Personal Income (M2)	% Chg.
1971-72	.261684		.624399		9.4383		1.4493	
1973-74	.277332	6.0	.615026	-1.5	9.9179	5.1	1.3605	-6.1
1975-76	.466293	68.2	7.758131	1161	11.8740	19.7	2.4226	78.1
1977-78	.265006	-43.2	13.138685	69.4	12.6622	6.6	2.0619	-14.9
1980-81	.208152	-21.5	6.727763	-48.8	12.8954	1.8	1.8944	-8.1

Note. % Chg. = percent change

[a]Maine Department of Educational and Cultural Services, Maine School Statistics.

[b]Bureau of the Census, State Government Finances.

[c]U.S. Department of Commerce, Survey of Current Business.

Table 2 (continued)

Summary of New York Data

	Variables							
Year	Gini Coefficient (V1)	Percent Change	Coefficient of Variation (V2)	Percent Change	State Aid as a % of Govt. Exp (M1)	% Chg.	State Aid as a % of Personal Income (M2)	% Chg.
1971-72	.129005		.302746		17.5006		2.4709	
1973-74	.118987	-7.7	.274339	-9.4	16.5652	-5.4	2.2950	-7.1
1975-76	.125961	5.9	.303385	10.6	14.6043	-11.8	2.4195	5.4
1977-78	.119545	-5.1	.290633	-4.2	14.6879	.6	2.1530	-11.0
1979-80	.116356	-2.7	.286601	-1.4	14.4228	-1.8	1.9942	-7.4
1980-81	.126144	8.4	.300504	4.8	14.2474	-1.2	1.9691	-1.3

Note. % Chg. = percent change

[a]New York State Education Department, Annual Educational Summary.

[b]Bureau of the Census, State Government Finances.

[c]U.S. Department of Commerce, Survey of Current Business.

Table 2 (continued)

Summary of New Jersey Data

Year	Variables							
	Gini Coefficient (V1)	Percent Change	Coefficient of Variation (V2)	Percent Change	State Aid as a % of Govt. Exp (M1)	% Chg.	State Aid as a % of Personal Income (M2)	% Chg.
1971-72	.253538		1.41570		9.5619		.8862	
1973-74	.335560	32.4	.72333	-48.9	10.1603	6.3	.9740	9.9
1975-76	.443044	32.0	.89414	23.6	9.9254	-2.3	1.1813	21.3
1977-78	.370930	-16.3	.84088	-5.9	13.1871	32.9	1.4231	20.5
1979-80	.401438	8.3	.99015	17.8	12.4494	-5.6	1.3166	-7.5
1980-81	.374603	-6.7	.81176	-18.0	11.1166	-10.7	1.2727	-3.3

[a]New Jersey Department of Education, Annual Financial Report.

[b]Bureau of the Census, State Government Finances.

[c]U.S. Department of Commerce, Survey of Current Business.

Table 3

Rank Order Correlations Among Variables

		New York				Rhode Island			
		V1	V2	M1	M2	V1	V2	M1	M2
(Gini)	V1	-	.77	.20	.37	-	.50	.50	.40
(Coeff of Variation)	V2		-	-.03	.43		-	.50	.30
(aid as % got expend.)	M1			-	.83			-	.30
(aid as % of pers. inc.)	M2				-				-

		Maine				New Jersey			
(Gini)	V1	-	.10	-.70	.30	-	.03	.49	.49
(Coeff of Variation)	V2		-	.60	.90		-	-.14	-.14
(aid as % got expend.)	M1			-	.50			-	1.0
(aid as % of pers. inc.)	M2				-				-